

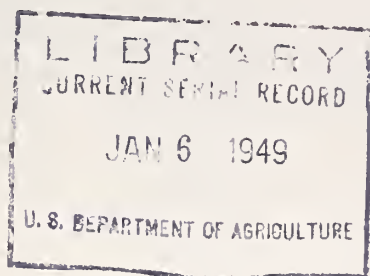
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FRONT COVER

Harvesting Grain in Western Europe

Farm machinery helped to harvest the favorable 1948 grain crops of Western Europe. (Photo by courtesy of Dr. Montell Ogden.)

BACK COVER

Map of Europe—Arable Land by Principal Food Crops

Cereal crops are grown on about 330 million acres, or about 41 percent, of the total arable land shown on the map.

Photos on pp. 272-5 by courtesy of Skytrain Airways.

NEWS NOTES

OFAR Officials Fly to Rio

Fred J. Rossiter, Acting Director, OFAR, and Ross E. Moore, Chief, Technical Collaboration Branch, OFAR, spent the first 2 weeks of November in Rio de Janeiro, where they attended the meetings of the United States Economic Counselors with various officials from Washington representing the Depart-

ments of Agriculture, Commerce, Labor, Treasury, and State.

Dr. Birdsall Visits

Collaborative Station in Peru

Benjamin J. Birdsall, Head of the Station Management Division of the Technical Collaboration Branch, OFAR, has been in Peru since October 18, working with OFAR's collaborative station at Tingo Maria. His assignment included brief visits to Bolivia, Ecuador, and Panama.

TCB Official in West Indies

Claud L. Horn, Head of the Complementary Crops Division, OFAR, has gone to the West Indies. He will visit several points in Cuba, Haiti, and the Dominican Republic for a study of kenaf and pyrethrum production. In Puerto Rico, he will consult with Federal Experiment Station officials regarding the exchange of plant materials of value in connection with the cooperative program with the other American Republics.

Dr. Clough Studies Agricultural-Education Program in Latin America

Ellis B. Clough, OFAR Field Consultant in Agricultural Education and Training, left Washington late in October to study programs of vocational and professional education in agriculture in selected schools and colleges of Guatemala, Honduras, Costa Rica, Panama, and Colombia. He will confer with officials and other workers in their fields on furthering the program of technical and scientific collaboration in agriculture, especially through the exchange of professors, students, and in-service trainees.

New Information Staff Members

Kenneth W. Olson, formerly of Production and Marketing Administration, has joined OFAR's staff as assistant to the Head of Foreign Information.

Also, with the January issue, Alice I. Fray, who has transferred from the editorial staff of the Federal Security Agency, will become editor of FOREIGN AGRICULTURE, succeeding Hally H. Conrad.

FOREIGN AGRICULTURE

HALLY H. CONRAD, EDITOR

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European Recovery And United States Agriculture

Wartime and reconstruction have provided vast overseas markets for farm products of the United States. This article points out how that picture may be changing.

by D. A. FITZGERALD



Western Europe is beginning to get back on its feet. We can see it in the faces of the people at work, and we can see it in the job of reconstruction that is being done. We can see it in their crops, which, thanks to favorable weather, this year were almost back to prewar levels. But reconstruction is a huge task and a slow one.

During the last 3 years, farmers of the United States have been supplying a substantial share of the food imports needed by the people of Europe. During the year ending in June 1948, the United States sent approximately 10,400,000 long tons¹ of grain to Europe, or about 40 percent of Europe's grain imports. During the two preceding years, we supplied 50 percent and 46 percent, respectively. This is in contrast to the prewar years of 1934 to 1938—a period that included some inferior crop conditions in the United States—when we supplied an average of 7 percent or less of Europe's grain imports.

Production of many United States farm products has been expanded to help meet foreign need. Now, as European recovery makes its slow progress, our farmers are raising some important questions. The answers will determine to an important degree the pattern of their future operations.

Will the improving European agricultural production materially reduce exports of United States agricultural commodities?

Or, on the other hand, will European recovery stimulate new demand for United States agricultural commodities?

In short, what seem to be the prospects for United States farm exports to Europe in the future?

These are vital questions for which no definitive answers, at least for the more distant future, can yet be given—although some tentative conclusions can be drawn for the year or two immediately ahead.

First, in spite of all the reports of good crops, bread-grain production in Western Europe² in 1948 was about 1.9 million long tons less than the 1934–38

¹ A short ton is 1.12 long tons.

² Countries cooperating in the European Recovery Program.



Field of shocked wheat in France, August 1948.

prewar average—and, meanwhile, the population has grown by 20 million persons. Furthermore, these countries normally import a third of their food. By no means does this year's favorable harvest make them self-sufficient. They still have need for heavy imports.

Nevertheless, we must beware of the assumption that United States aid under the European Recovery Program represents new and additional demand for our commodities. Such is not the case. Under ERP, our total exports to Western Europe this year probably will be somewhat less than they have been each of the two preceding years.

In summary, although it may not be possible to predict with any certainty the long-range export demand for United States farm products, I am of the opinion that Western Europe's demand for certain of our agricultural commodities next year at least will very nearly equal the demand of this year.

These highlights represent my impressions of the relationship between European recovery and the agriculture of the United States. Now let us take up the situation in greater detail.

As for this year's harvest, it is obvious that nature, in contrast to last year, was good to Western European farmers in 1948. Yields in this favorable year went up to average level of prewar years. (Total acreage, however, was still about 10 percent below prewar.)



Large canal, which drains land that will be put into cultivation when sufficient machinery is available, North East Polder, the Netherlands.

Whether there will be equally good weather conditions next year is, of course, in the lap of the gods. European farmers have no more assurance of continuing good weather than have farmers of the United States. In my opinion, it will take better than average weather conditions in Europe next year to obtain prewar yields. The best guess that could be made today probably would be that Western Europe's bread-grain production in 1949 will still be somewhat less than prewar. Meanwhile, as was pointed out before, Western Europe now has 20 million more mouths to feed than it had before the war, and even at that time it imported about one-third of its food.

As to the effect of ERP, there have been assumptions that the appropriation made for European recovery and being administered by the European Cooperation Administration represents an additional demand, over and above the demands of the last 2 years. That this is not so is shown by the fact that the volume of United States agricultural products now moving to Western Europe is about the same as the volume that has moved during each of the last 2 years.

ECA's basic function is to finance essential imports into participating countries of Western Europe by making up the dollar deficits in their balance of trade—making up the deficits, of course, only to the extent that it is necessary and that the funds authorized by the Congress permit. The following background may be of interest.

Going back a number of years, we recall that before World War I the value of our imports generally was larger than the value of our exports. This changed after World War I and our exports became greater than our imports. Since World War II our so-called favorable balance of trade has been larger than ever. During 1946-47, for example, United States exports totaled \$12,750,000,000, whereas our imports totaled \$5,400,000,000. We had a "favorable" balance of trade of \$7,350,000,000. In 1947-48 our exports were even larger, totaling nearly \$14,000,000,000. Our imports also were slightly larger, totaling about \$6,300,000,000. Therefore we had what is misleadingly called a favorable balance of trade amounting to roughly \$7,750,000,000.

Now during 1946-47 and 1947-48 those balances—that is, the excess in the value of exports over imports—were financed in a variety of ways. They were financed by the further drawing down of any credits that the importing countries had in the United States, by the liquidation of importing-country capital assets in the United States, by shipments of gold to the United States, and by various types of loans and grants

that the United States made—including, for example, the British loan, UNRRA, and interim aid.

By the summer of 1947 it became apparent that the inability of European countries to expand their exports sufficiently to pay for their imports was not likely to be corrected in the near future. The previous arrangements had not enabled Europe to recover from the effects of the most destructive war in history. So, in June 1947, Secretary of State Marshall said in effect that if Europe would care to develop a sound program of economic recovery the United States would consider sympathetically the financing of the difference between the total cost of necessary dollar imports and the dollar earnings of Europe. While Western Europe was developing such a proposal, three committees appointed by the President concluded:

(1) That the United States could finance a sound European Recovery Program, without serious danger to its own economy;

(2) That it was an economic necessity that such a program be financed, since, with Western Europe in financial straits, it would not be possible to have continued economic progress in the United States; and

(3) That with a Western Europe virtually flat on its back, totalitarian influences undoubtedly would materialize in those countries to such an extent that this Nation, in self-defense, might have to become an armed camp.

The Eightieth Congress, on April 3, 1948, passed the basic European recovery legislation and the next month made the first appropriation—about 5 billion dollars—to finance this first year's effort. Five billion dollars, therefore, is flowing out of the United States to help fill the financial gap in the trade between other countries and us. That gap, however, during each of the past 2 years was from 7 billion to 8 billion dollars. Consequently, unless foreign countries are able to increase their shipments to the United States or in other ways to earn additional dollars, such as through tourism or shipping services, the probable foreign demand for United States exports in 1948-49 will be less than in 1946-47 or 1947-48. The European Recovery Program, in fact, is contributing a demand somewhat less than the demand that was financed in the preceding 2 years through the devices that have been mentioned.

There are too many unknowns to attempt to predict

Dr. Fitzgerald, the Director of OFAR, is also Director of the Food and Agriculture Division, Economic Cooperation Administration.



Harvesting grain in France with a horse-drawn binder.

the foreign demand for United States agricultural commodities throughout the full four scheduled years of ERP. The 1949-50 year is not too far distant for a fairly good look, however, and therefore let us see what may be expected of that more predictable period.

On the one hand the prospective foreign demand for our farm products will depend on the next appropriation that the Congress may make for European recovery. On the other, it will depend on the ability of Western Europe to earn more dollars.

By and large, the limiting factor in foreign demand today is lack of dollars. There are very few countries in the world that do not, in one way or another, have to limit the dollars that their nationals or their governments may spend. Even our neighbor Canada, in recent months, has had to limit the number of United States dollars that Canadians are given to spend in this country. All European countries have very strict exchange controls. Many Latin American and Far Eastern countries are forced to do likewise. In general it may be said that in 1949-50 the demand—the effective demand on the United States—will be limited by the number of dollars that the various countries have available.

The impact of this general world shortage of dollars on individual agricultural commodities is, of course, not uniform because some countries, like some persons, can better get along without some commodities than can others. The limited overseas buying of many of our so-called surplus commodities is not



A heavy American-made tractor preparing a seedbed on land never before in cultivation, North East Polder, the Netherlands.

primarily the result of lack of demand—in the sense of nutritional requirements, or of willingness of people abroad to pay their local currencies for these commodities—but of the inability to find enough dollar exchange.

Bread grains, primarily wheat, head the list of United States agricultural products for which dollar exchange is being made available in amounts adequate to take up a major portion of our exportable supplies. Ever since the war most European countries have had a bread ration. Much of Europe still does. The countries place an increase in the bread ration, or an elimination of the bread ration, very near the top of priority for dollars. In 1947–48 the United States exported some 480 million bushels of wheat, or nearly 13 million long tons. The demand, including the availability of dollars, is for approximately as large a volume of wheat exports this year. And it appears probable that the demand for United States wheat exports in 1949–50 will be of almost comparable magnitude.

In making such a prediction, however, we do have to ask ourselves—even though the answer is not available—what exports are likely from other wheat-producing countries. Last year, the exports from USSR to Western Europe amounted to some 340,000 long tons of bread grains. Our impression is that Russian crops this year are slightly better than they

were last year, and exports could be correspondingly larger—but we do not know whether they will, in fact, be larger. We also have to evaluate production in other parts of the world—Canada, Australia, and Argentina. Canada's crop was larger than that of a year ago and somewhat above the 1935–44 average. Australia's crop was of record size a year ago and this year's harvest—which begins in December—was at the time of this writing thought to be somewhat smaller. In the case of Argentina, wheat-production trends have been downward, and I see no reason to anticipate a material change. All in all, prospects appear to be good for at least another year of relatively high demand for United States wheat.

Feed grains represent a second priority requirement of Western Europe. Production of livestock products is still below prewar, probably amounting to only 70 or 75 percent of the prewar output. Feed grains and protein feeds are greatly needed in order to make satisfactory progress in rehabilitating the livestock enterprise. It is probable that exports of coarse-grain feeds from the United States both this year and next year will be larger than either the prewar average or the exports of 1947–48.

Fats and oils are a basic commodity group that continues to be in critically short world supply. Western Europe's production of fats and oils prior to the war was nearly 3 million long tons. This year it will be about 2.3 million. Western Europe imported about 3 million long tons (net basis) of fats and oils annually before the war. This year the area hopes to have a net import of about 2 million tons. In summary, the prewar supply of nearly 6 million long tons has fallen to a point where this year's supply will be less than 4.5 million.

There is no reason to expect any exceptional expansion in Europe's production of fats and oils next year, and there is every reason to expect import requirements to be as large as this year's. That emphasizes the importance of United States farmers maintaining a large acreage of edible oilseed crops. It is currently estimated that this year's United States production of all fats and oils will be slightly more than 10 billion pounds. We will need at least that much production next year.

Higher-cost foods, such as meat and dairy products, from the point of view of Western Europe, take a somewhat lower priority. The United States can expect little if any demand for meat exports to Western Europe next year. Meat costs too much in relation to the available dollars. There will be, if United States supplies permit, some demand for dairy prod-

ucts. At present, not enough dry skim milk is being produced to meet export demand. The supply is being reserved, first, for the Children's Fund, and the remainder, above domestic requirements, for the Army in occupied areas. As a consequence, ECA is not financing any exports of dry skim milk. Assuming continuation of the Children's Fund, a continuing high export demand for dry skim milk may be expected throughout all of next year.

Beans and peas are other commodities that appear to have only medium priority on Western Europe's list. Although it is a little early to anticipate, it appears likely that the demand for dried beans and peas next year may be somewhat less than was experienced this year.

Tobacco is an important commodity whose export future today appears uncertain. This year's total exports of United States tobacco may be no more than two-thirds of what they were last year and perhaps somewhat below prewar. For the current year, this will be no national calamity—but growers are quite properly worried as to whether the downward trend will continue. They may well ask whether Western Europe, because of its dollar shortage, will attempt to divert its tobacco demands into new production or into types grown in other parts of the world. The question is difficult to answer. If European recovery is successful, it may be assumed that the requirements for United States tobacco will gradually increase—but any such increase, in the long run, can be maintained only to the extent that Western Europe is able to increase its industrial productivity and its dollar-earning exports. And Europe's ability to earn dollars is not wholly dependent on Europe's own efforts; it will be greatly influenced by United States willingness to buy from Europe and to make it possible for Europe and other parts of the world to sell in the United States.

Cotton is the final commodity that I would like to mention. Exports of United States cotton last year were the lowest in some time. Nevertheless, Western Europe generally is rather short of cotton and is requesting a substantial volume of ECA financing for this commodity. As a result, it may be expected that cotton exported from the United States during 1948-49 will be about double last year's low volume. It must be remembered, however, that Western Europe will try to buy cotton from nondollar areas as much as possible, although in this respect it will be hindered somewhat because cotton stocks in other parts of the world are lower than a year ago and production is only slightly higher.



Machines for the Farm, Ranch, and Plantation, by Arthur W. Turner and Elmer J. Johnson. 793 pp., illus. McGraw-Hill Book Co., New York, Toronto, etc., 1948. This work contains informative and instructional material relating to all machines used in producing and, in some cases, partially processing the crops grown in the United States and Canada. Each section covers a group of machines classified according to specific functions, such as preparation of seedbeds, seeding, cultivating, harvesting, etc., including the selection, operation, field servicing, reconditioning, and storage of the machines. It is profusely illustrated and provides practical information for students, teachers, farmers, and commercial interests dealing in agricultural machinery.

The Market Outlook for United States Seed Potatoes in Western Europe, by A. E. Mercker, Foreign Agr. Circular FFV-4, 16 pp. Issued by the Office of Foreign Agricultural Relations, Washington, D. C., September 27, 1948. This is a summary of personal observations made by the author during a survey, under the auspices of the Department's Research and Marketing Act, of the possibilities for broadening the foreign market for United States seed potatoes in various European countries. The countries covered are the United Kingdom, Germany, Austria, France, Belgium, Italy, Spain, Portugal, the Netherlands, Denmark, Ireland, and Switzerland.

The State of Food and Agriculture, 1948, a publication of the Food and Agriculture Organization of the United Nations, 216 pp., illus., Washington, D. C., September 1948. This survey of world food and agricultural conditions and prospects was prepared at the request of the member governments as a "basic document for the intergovernmental consultations on plans and programs at the Fourth Session of the FAO Conference in November; but it is also addressed to the general public." The document is in four parts as follows: Part 1, World Review, in which the current food, fiber, textile, and forest-products situation is discussed as is the outlook for the next 3 years, the consumption goals, the battle for agricultural production, the orientation of international trade, and the next steps to be taken. Part 2 is a discussion of the pertinent problems of the various countries. Part 3 considers the commodity situations—food, fibers, and fisheries and forest products. Part 4 discusses the tools for production.

Cacao Center at Turrialba



by GEORGE F. BOWMAN

The Inter-American Cacao Center is a part of the Inter-American Institute of Agricultural Sciences at Turrialba, Costa Rica. The center is organized to coordinate research work on cacao from all the interested countries of Latin America and to train students from these countries and from the other members of the Pan American Union in the basic principles of cacao cultivation. It is supported by a grant to the Institute from the American chocolate manufacturers and a gift from the United Fruit Company of a bearing cacao farm of 100 acres in Costa Rica.

The world supply situation in cacao has been deteriorating for some years and within the past 2 or 3 years has reached the point of crisis. In 1939 the world production and world consumption were almost exactly balanced at a little over 700,000 long tons.¹ But the supply was very greatly reduced during the war because of the shipping situation, whereas consumption increased to the point that all the stocks of cacao beans in processing countries were practically wiped out.

At the end of the war when shipping again became available, it was found that the actual world production had become inadequate because of the ravages of diseases and insects in the most important producing area, British West Africa. A virus disease called the "swollen-shoot complex" and damage from capsid bugs are the important agents of reduction in yield. Cacao-producing countries in the American Hemisphere had already, 20 years ago, suffered from witches'-broom and pod rots, and of all of them only Brazil had maintained its production. By 1946, world production, in spite of continuously increasing prices, had been unable to rise above 600,000 tons per year, whereas the potential consumption was approximately 800,000 tons. Thus, cacao, one of the most valuable gifts of the Americas, had become a scarcity.

During 1946 the Inter-American Social and Economic Council, recognizing the gravity of the situation, created a Special Cacao Commission and on August 5, 1947, approved a recommendation of this Commission to the effect that a "Technical Committee of experts . . ." be formed: This Committee to include representation from each country having a

direct interest in cacao, from the Pan American Union, the Inter-American Institute of Agricultural Sciences, and the American Cocoa Research Committee; and its function to be that of bringing short- and long-time investigations to fruition through cooperative use of resources available in all the bodies concerned. The suggestion was made that the Technical Committee hold a meeting at the Inter-American Institute of Agricultural Sciences in Turrialba during September 1947 to consider a plan of work for the future. Terms of reference for such a meeting were also suggested.

Preliminary to the recommendations of August 5, 1947, the Special Cacao Commission called a meeting on June 3, 1947, in Washington, D. C., at which technical staff members of cacao programs in Brazil, Ecuador, and Venezuela, and of the Inter-American Institute of Agricultural Sciences and the Cocoa Research Committee of the American Cocoa and Chocolate manufacturers consulted with the Commission. A significant development during this meeting was an announcement by members of the Cocoa Research Committee that they were prepared to assist financially in the development of cacao research and educational facilities at the Inter-American Institute of Agricultural Sciences.

The meeting to consider a plan of work for the Technical Committee was held in Turrialba between September 30, and October 4, 1947. During this meeting a major portion of the technical men working on cacao in the Americas agreed upon the plan presented in the report of the First Inter-American Conference on Cacao.

Cacao Center Established

To summarize very briefly, it was agreed to form a technical committee to coordinate the research work on cacao in all the interested member countries and to establish the Cacao Center in the Inter-American Institute of Agricultural Sciences at Turrialba for investigation of problems common to all concerning cultural methods, disease control, and

George F. Bowman is Head, The Inter-American Cacao Center, Turrialba, Costa Rica.

¹ 1 long ton equals 2,240 pounds or 1.12 short tons.

processing procedures. Furthermore, it would train students from all the producing countries in the application of the results of these investigations, as well as in the methods of attacking additional problems in their own countries.

The Institute at Turrialba was in an extremely fortunate situation for the establishment of this center, since Costa Rica is one of the few areas in the world not immediately threatened by the more serious cacao diseases, and it contains extensive plantings of cacao that are a mixture of all the major genetic strains in the world. The old seedling plantations in Costa Rica and the neighboring areas of Panama contain 12 to 15 million trees, among which are found practically all the variations which could be expected from long-continued crossing and recrossing of all the original genetic types.

The new Cacao Center embarked on its program early in January 1948, with the arrival of 9 students and 1 man to act as chief of the center. Under the

terms of the grant, allowance is made for maintenance of 20 students a year at the center divided as follows: Four students are allowed in category I and these should have already acquired their master's degree in one of the natural sciences or the equivalent of a bachelor's degree plus a number of years of experience in cacao cultivation. Eight students in category II should have bachelor's degrees in agriculture or its equivalent and after 1 year at the center will be candidates for the master's degree from the Institute. Eight students in category III are to be chosen from the technicians in cacao stations throughout the hemisphere and are expected to concentrate on the practical aspects of propagation and cultivation procedures for cacao.

It will probably be some years before the full quota of students will be filled during any one year for the simple reason that cacao students or cacao technicians are at the present time a scarcity in the producing countries. If 20 of the best cacao men should attend



Technicians attending the Cacao Conference at the Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica, September 1947.

the Institute during any one year, it would, at the present time, almost denude the hemisphere of technical advice on cacao.

Of the nine students in attendance during the first 6 months of the program, one comes from Haiti, one from Nicaragua, one from Costa Rica, three from Mexico, and two from Ecuador. One student from the United States came for a 6 months' course only and is now in charge of establishing a very large plantation for the Liberia Company in the Republic of Liberia.

The present program of the Cacao Center, in addition to carrying on as much research as possible in cultivation procedures, propagation, and disease control, is to train the students in the practical aspects of cacao production and to lead them in preparing and conducting their own research projects in the various phases of cacao improvement. The student projects will be of value in the general research program, but they are designed particularly to train students in the mode of attack on their local problems and in the organization of research work in their native countries, in order that this work may be of most certain and immediate value, not only to that

country but also to the other cacao producers of the Americas.

All the students work together on plant-performance studies and in this work take records on all the measurable phenomena that can be observed in the growth of cacao trees. Each student has 20 trees on which he takes weekly records on vegetative growth, flowering, fruit setting, fruit development, disease incidence, insect and animal depredations, and such. Among these 20 trees are pruned, unpruned, fertilized, shaded, and unshaded trees, plus some treated with various of the minor elements. The observations made during this recording work and the data collected are expected to afford a considerable increase in the basic knowledge of cacao growth and development. The work will, as well, give the students an intimate knowledge of the plant itself.

Research Program

In addition to this work, the center itself is carrying on experiment tests with fungicides and cultural methods for disease control with particular emphasis on *Phytophthora palmivora*. This (pod rot of cacao) is the most important disease in Costa Rica and occurs in all parts of the cacao world. Witches'-broom, Monilia pod rot, and swollen shoot are happily not found in Costa Rica, and direct work on their control can, therefore, not be done here; but the experience gained by students in control of pod rot will be of inestimable value to them in organizing concerted attack on the diseases most important to their respective home countries.

The center was fortunate in having for 6 months the services of a plant pathologist from the faculty of Cornell University. During the 6 months a survey was made of the fungi attacking cacao or appearing on cacao in Costa Rica. The students were also given an opportunity to learn some of the principles of plant pathology. Both class work and practice in identification and culture of fungi were given to all students.

On the 100-acre lowland farm made available by the United Fruit Co., work has been started on transforming half of it into a demonstration farm. Basic information on cultural methods and treatments of cacao is meager as compared with that on many other crops, but the proportion of this information that has been applied on the existing cacao farms is even more meager. Enough is already known about the subject to increase the average production by more than 100 percent, and it is planned to apply all measures that are of proved economical value to this



Cacao seeds, when removed from pods, are covered with a pulpy substance. The seeds are heaped in piles for a short period of fermentation and then spread on drying platforms.



Cacao pods infected with pod rot.

50-acre demonstration farm. On the other 50 acres, experiments will be conducted as rapidly as possible; and, as soon as any new conclusions can be reached, the demonstration farm will be given the benefit of them.

Student Projects

The student projects now in operation include basic study of flowering and fruit-setting habits, with particular emphasis on pollinization and causes of self-incompatibility; effect of varying light intensities in the early growth and development of cacao plants; effect of pH on germination and early growth; vegetative propagation, with particular emphasis on development of simpler and more economical techniques; fermentation methods and equipment for the small farmer; reasons for local variations in cacao quality; life history and natural modes of transmission of *Phytophthora palmivora*.

Some of these projects have already shown great promise, and it will be possible within a few months to form definite conclusions and make specific recommendations for cacao producers. A new method, for instance, has been developed for propagation of cacao by means of cuttings, and it is believed that a very practical technique for the small farmer will be worked out. Small wooden frames put over nursery beds on the cacao farm itself have given good results, even though only watered and tended twice a week. If this system can be perfected, it will replace the present accepted method. This requires the use of concrete solar propagators that are expensive to build, expensive to maintain, and that must be tended at hourly intervals every day. Some success has already been recorded in the study of *Phytophthora*, and the information accumulated will probably lead toward a much

simpler and more practical method for control of this disease.²

Additional students for the Cacao Center will begin to arrive in October, and still more are expected to come in January 1949, as well as at various times throughout the year. The students now in attendance will be returning to their home countries early in 1949, and it is fully expected that they will provide a considerable impetus toward the achievement of the basic aim of the Cacao Center—to assist the Americas to produce more cacao, of better quality, on less land, at a lower cost.

² The results of these experiments and trials, as well as any other pertinent data that become available, are now being published in a monthly *Cacao Bulletin*. This bulletin is available to anyone interested in the cacao industry. Requests should be sent to Inter-American Cacao Center, Box 74, Turrialba, Costa Rica.



Tobacco in the Dominican Republic, by Harry A. Allard and Howard F. Allard. Foreign Agr. Rpt. No. 30, 27 pp., illus. Issued by the Office of Foreign Agricultural Relations, Washington, D. C., September 1948. This is a discussion of the growing, curing, and utilization of tobacco in the Dominican Republic. Diseases and insect pests attacking the plant and the outlook for improving quality and yield of the crop are also considered. A brief history and geographical description of Hispaniola, the island on which the Republic is located, introduce the discussion. The authors are well known in the U. S. Department of Agriculture. Harry A. Allard, before his retirement, was senior physiologist in the Division of Tobacco, Medicinal, and Special Crops, Bureau of Plant Industry, Soils, and Agricultural Engineering; and Howard F. Allard is an agronomist in the Division of Rubber Plant Investigations of the same bureau.

Planting and Harvesting Dates in Latin America, by Mary S. Coiner. Foreign Agr. Rpt. No. 32, 36 pp., illus. Issued by the Office of Foreign Agricultural Relations, Washington, D. C., October 1948. A listing of planting and harvesting dates and rates of planting for various commodities and countries in Latin America, compiled particularly for research workers in the field of agriculture. Because certain data were scarce and unreliable, this is not presented as a definitive compilation; revisions will be made as corrections and additions are available.

Malye Desert— A Turkish “Combine” Farm

Turkey wants to mechanize its agriculture. The Government has made a start by establishing 13 “combine” farms on which modern farm machinery and practices are used.



by CHARLES R. ENLOW

On a visit this fall to Malye Desert farm, one of the Government's “combines” about 134 miles from Ankara, the United States Agricultural Attaché and several Turkish officials observed the wheat harvest. Thirty-three combines were being used for cutting in one field, and the whole operation was being carried out with a high degree of organization and efficiency.

Malye Desert farm is the result of a program begun by the Government at the outset of World War II to increase cereal production in Turkey. Authorities, faced with the problem of making the best use of their inadequate supply of farm machinery, decided to establish new farms on some of the several million acres of land that had never been plowed. Farms owned and operated by individuals could not have done an effective job alone. There are only 6,172 farmers in Turkey, most of whom own only a few

acres. Eighty-five percent of Turkey's 19,000,000 people live in villages and farm the surrounding territory. Each villager usually owns a small plow, a scythe, and a threshing sled. With this equipment a farmer who grows 15 acres of wheat must spend 60 days plowing, 60 days planting—he broadcasts the seed by hand and plows it under—60 days harvesting, and 60 days threshing.

Malye Desert farm, like all the other combine farms, is not a “collective.” It is operated just like a big private farm in the United States. The employees are hired from the adjoining villages and have become very skillful in handling tractors, combines, trucks, and machinery and in doing repair work. It is surprising how quickly the Turks learn to operate and repair machinery, and they show real ingenuity in making use of inadequate tools and repair facilities.

The farm, which consists of 54,250 acres, is laid out in fields about 1.25 miles square, each containing about 920 acres. The 240 miles of dirt roads main-



Open-air repair shop that follows the combines from field to field.



An American stops to chat with a Turkish woman who is threshing with a team of oxen and a sled.

tained between fields indicate to some extent the size of the farm. The average rainfall in the area is 17 inches a year. It falls from October to June, with very little rain the rest of the year. Three years ago this land produced only a sparse cover of grass. In 1948 the farm was planted to 26,000 acres of wheat, producing 35 bushels an acre; 3,000 acres of barley, yielding 55 bushels; and 3,750 acres of rye that produced 22 bushels an acre. The rest of the farm was in summer fallow until it was planted to the same crops late in fall—27,500 acres of wheat and the balance in barley and rye.

The combines used to cut the 1948 crop threshed more than 1,000 bushels each a day, working from 8 a. m. until 11 p. m. Thirty-four 7-ton trucks hauled the grain to a corner of the field, where it was piled in long ricks of approximately 36,000 bushels each. The Soil Products Office, an organization charged with the responsibility for purchasing wheat, barley, and oats for use by the military forces and the cities of Istanbul, Izmir, and Ankara, had a group of men and 40 additional trucks engaged in sacking the wheat and hauling it to the railroad 24 miles away.

A mobile open-air shop, with equipment for welding, forge work, and any necessary repairs, was maintained at the edge of the field. Spare parts were generally not available, and it was up to the shop to promptly make or repair any broken part of a combine or truck. If a combine in the harvesting line was forced to stop, the others passed by, and troubleshooters came to work on it immediately. Since many

of the combines are several years old, considerable ingenuity is required to keep them in operation. Harvest started in July and was not to be completed until September 20 because of the large acreage, but the dry summer weather made it possible to continue cutting over this long period. The harvest must be completed on schedule, because the big seeding program begins October 1.

In addition to its operation as a model, the Malye Desert farm makes other contributions to Turkish farmers. The farm has 47 combines, 14 of which are used on neighboring farms. The charge made—200 liras, \$71.40—per day, is considered “at cost.” At this rate the farmer pays about 7 cents per bushel for custom threshing of wheat that, if it is top quality, he can sell to the Soil Products Office for \$2.70 per bushel.

The farm produces Sertak wheat—a hard white wheat developed at the Eskişehir Experiment Station



Threshing sled used on the smaller Turkish farms to cut the straw and shell the grain.

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by Neuman Bey, who years ago attended Kansas and Washington State Colleges. The seed, cleaned and treated for smut control, is sold to the farmers for planting. The barley grown is a white two-row called Tokak, developed by the Ankara Experiment Station, and the rye, of German origin, is called Petcus. Seed from these crops is also supplied to farmers. During the war, grain was produced only to augment supplies, but, since the war, all the farms are producing quality seed for anyone who wishes to plant it.

In addition, the seed-cleaning machinery on the farm is available to farmers who wish to use it. Seed wheat may be treated there also for loose smut, which is prevalent in Turkey, particularly if autumn weather conditions are such as to favor germination of the smut spores when the wheat is germinating.

A look at the "combine farms" as a whole is impressive. In 1948 the 13 farms, comprising 418,530 acres, planted 201,630 acres of crops—177,420 acres of wheat, 16,945 of barley, 2,145 acres of oats, and the balance—about 1,000 acres—was in flax. The crops harvested, or being harvested, are estimated to yield as follows: Wheat, 3,900,000 bushels; barley, 504,000 bushels; rye, 88,000 bushels; oats, 75,000 bushels; and

flaxseed, 6,000 to 7,000 bushels—altogether, more than 132,000 tons of grain.

There are 235 tractors on the farms, practically all American made. In fact, most of the farm machinery is from the United States or Canada and includes 292 combines, 356 plows, 181 disk harrows, 189 grain drills, 54 cultivators, and a few seed cleaners, hay balers, trailers, and other miscellaneous implements. Considering the acreage of grain involved each year and the work done on neighboring farms, each tractor, combine, and implement carries a heavy work load. If all the combines were used to harvest only the crops produced on the 13 farms, they would average nearly 700 acres per combine.

The farm managers are interested in increasing their livestock numbers, particularly of sheep, in order to utilize straw and chaff and to graze the green areas. Malye Desert farm, which has 300 sheep, hopes to get at least 5,000. Together, the combine farms now have 60 horses, 397 cows, 6,000 sheep, and 1,400 poultry.

As mentioned previously, Turkey has several million acres of land on which production could be made as profitable as that of the 13 farms. In fact,



Combines cutting wheat on Malye Desert farm near Kirşehir, Turkey.



Tokak barley developed by the Ankara Experiment Station.

these farms are so distributed as to provide good samples of this uncultivated land,¹ which lies principally in central Anatolia. One farm is near Samsun, on the Black Sea, and one near Urfa, on the Syrian border. The others make a rough rectangle, bounded by Eskişehir, Konya, Sivas, and Amasya, within central Anatolia. Climatic conditions in this section are not unlike the lower rainfall areas of the Palouse wheat country of Washington, Oregon, and Idaho.

In addition to the opportunities for bringing new land into production, estimates indicate that the use of power and machinery on land now farmed could double the production of cereals in Turkey and greatly increase that of other crops, dairy and beef cattle, and sheep. Of course the "small farm" problem is a real one. It would involve cooperative ownership of machinery and cooperation between farmers in utilizing the machines. Such problems, however, could no doubt be solved in time, particularly when the small farmer learns that such cooperation would mean an end to the drudgery of present methods and would enable him to devote more time to other enterprises, such as vegetables, fruit, dairy, poultry, and even recreation.

Doubling the present cereal production would afford a wonderful opportunity to Turkey. It would hasten the development of highways and other means of transportation and help to finance innumerable irrigation and flood-control projects. Thus the total agricultural production would be increased to provide a huge supply of raw materials for mills, factories, and processing plants. The use of machinery would release millions of people from farm work and provide the source of labor that must be available before any

¹ Approximately 18 percent of Turkey's 193,245,050 acres is cultivated, 50 percent is in grass, and another 18 percent is labeled "unproductive lands."

extensive industrialization can be effected. Development of the iron, coal, and other mineral resources would naturally lead to the establishment of plants for manufacturing machinery and equipment for innumerable labor- and time-saving devices that are lacking in the country. Large-scale industrialization seems improbable in Turkey, unless the labor can be provided from the village population that, with present methods, is needed for farm work.

Turkey is willing and anxious to assume its share of the responsibility for providing food for hungry millions, but the farms need tractors and other machinery. If they can get enough of them, including spare parts and repair equipment, the beginning of a real development, both agriculturally and industrially, will have been made in the country.



Foreign Market Notes—Tobacco, Foreign Agriculture Circular FT-11-48, 4 pp. Issued by the Office of Foreign Agricultural Relations, Washington, D. C., November 8, 1948. Preliminary report of a study of foreign market outlets for and competition with U. S. tobacco in El Salvador, Guatemala, Honduras, Panama, and Nicaragua. The information is based on reports from George W. Van Dyne, OFAR Marketing Specialist, who is making a 6-month study of the tobacco situation in 15 Latin American countries, under the provisions of the Research and Marketing Act. When he returns, Mr. Van Dyne will prepare a comprehensive report, summarizing his observations and conclusions.



Guatemalan Airlift



by GRAHAM S. QUATE

The boom in air-freight transport throughout Central America was pointed up recently when 10 planes carrying purebred livestock, purchased in the United States by the Guatemalan Government, were unloaded within a period of 2 weeks at Aurora airport in Guatemala City. Off the planes came horses from Texas ranches and jacks from Missouri, hogs, Brahma bulls, sheep and goats, dairy cattle and beef animals, and a Shetland pony.

Most of the new arrivals strolled down the ramps after their 5¼-hour trip from Houston, Texas, as nonchalantly as any seasoned two-legged traveller. Only the Brahmas, suspicious of strangers and mankind in general, were handed down in their strong wooden crates by mechanical hoisters.

In making the purchase, the Director General of Livestock for the Guatemalan Ministry of Agriculture

selected 301 head of breeding stock. The distribution of these animals through the rich agricultural sections of the Republic is an important step in the program for improving the local livestock industry.

These were not the first animals to be flown into Central America. Hundreds have been brought in by air. Most planes flying freight into this region are equipped to transport animal passengers in safety and comfort. Floors have been reinforced, and main compartments are provided with light but substantial stalls constructed of metal-tubing uprights and canvas walls. The stalls are removable and may be arranged in several ways to accommodate the various kinds of animals being shipped. Loading and unloading a plane takes less than an hour. It is facilitated by well-constructed ramps that are easily wheeled into place.

The widespread effort made to improve local livestock is aided by the carefully planned research program being carried on by the Instituto Agropecuario Nacional, a division of the Guatemalan Ministry of Agriculture that is receiving cooperative assistance from the Office of Foreign Agricultural Relations. The Instituto has under way a number of research projects for solving local problems on livestock management and the nutritive requirements of animals living

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under tropical conditions. One of the features of this program is an investigation of native feedstuffs, with special reference to the evaluation of their importance as animal feed. This work has proceeded far enough to indicate that some native forage plants are more nutritious than those common to temperate zones. It is now known that some wild desmodiums, which are frequently destroyed by prevailing pasture-improvement methods, are highly palatable to livestock and very high in protein content. The outlook for improving animal husbandry practices throughout the region is very bright, and the advantages offered by economical air transport is an important factor in this development.

The question naturally arises why so many farm animals are being moved into Guatemala and other Central American republics by air. The answer is that there is not only an urgent need here for highly developed breeding animals, but also that this mode of transportation is proving to be economical and satisfactory. Air rates are high. But when air-freight expenses for moving costly farm animals from United States farms to interior points in Central America are compared with the costs of shipment by rail and sea, the higher air rates are more than offset by an elimination of handling and holding charges and by the lesser risks involved in shipments by air.

Published tariffs on lots weighing more than 5,000 pounds quote 14 cents a pound for air freight from New Orleans to Guatemala, 16 cents to San Salvador, and 19 cents to Tegucigalpa. Rates from Houston are slightly higher. Naturally, only a small part of the air freight coming into Central American countries consists of farm animals. The remainder includes manufactured goods, having high value per unit of weight, and other items, such as machine replacement parts that are needed on short notice and that cannot be stocked by local agencies because of the tremendous investments involved. With animals, as with certain types of merchandise, it is of great advantage to know exactly when arrival may be expected.

In addition, veterinarians point out shipping livestock by air lessens the risk of shipping fever and other diseases that are sometimes acquired by animals arriving in a devitalized condition after long rail and sea trips. The intermediate delays often occurring on overland and ocean journeys frequently upset and weaken the animals so shipped. This in turn makes difficult their adjustment to tropical conditions. There are some advantages also in the landing of new arrivals in cool, tick-free highland zones, where they



Cattle, transported by air, travel in individual compartments.

may be immunized against piroplasmosis before being moved into lowlands infested with fever ticks. The rapid delivery of farm animals to foreign destinations also means that they are not long absent from caretakers who are able to detect and treat any threatened sickness resulting from a sudden change in climate or from other causes.

An interesting sidelight on the current air-freight boom is the rapid growth of interest in private flying. Every Central American capital has a flying club.



Unloading a Missouri jack from a cargo plane at Aurora airport, Guatemala City.

Guatemala City alone boasts of 25 privately owned planes. This enthusiasm for light planes is being spread by a group of flying farmers who know from experience that the world has no lands more productive than those of Central American coastal sections and no finer places to live than near the mountain tops of this area. Previously, there was no convenient transportation between mountain plateau and low-lying farmland, but now numerous finqueros glide up and down these tremendous slopes. The farmer who flies can now spend his workdays on a lowland farm and on Friday evening take off for a weekend of relaxation in a cool mountain retreat. Trips between farm and home that used to require at least a full day are now being made in a matter of minutes. Some Guatemalan organizations planning new land developments have placed the airplane at the top of their list of necessary farm equipment.

All the way from the Gulf of Fonseca to Tehuantepec, plantation owners are building private landing strips. One enterprising operator, who is developing a new farm in western Guatemala along the route of the Pan American Highway in anticipation of its completion, recently flew a lot of heavy unassembled land-clearing equipment into his new properties. Another, having difficulty in moving an unusually heavy sugarcane crop, arranged with a local farm-

equipment agency for the delivery of a badly needed tractor and trailer. They were flown directly from factory to finca, and the machine was at work within 36 hours after its purchase.

Central Americans have long been air conscious. It is often said that these Republics stepped directly from oxcart times into the air age. All have local air-transport services that reach into the most isolated sections. The northern third of Guatemala, known as El Petén, actually has more landing fields than it has towns. More than 2,000 tons of chicle are flown out of this section every year to be landed at the Republic's nearest seaport. Eventually this forest product may be flown directly from tapping areas to the markets of Chicago and New York.

Two well-equipped air-freight lines are now making nonscheduled runs into Central America. Planes flown out of New Orleans and Houston arrive at the rate of about one each week. One air line, flying out of Chicago by way of Miami, began its runs to this region in July, with the number of trips steadily increasing.

Volume of air freight into Guatemala has risen sharply each year since the initiation of this service. In 1945 all air freight delivered at Aurora airport amounted to 150,000 pounds, according to custom-house reports. In 1946 the volume rose to more than



These American horses, purchased by the Guatemalan Government for use in its livestock-improvement program, reach the end of their air journey.



Bananas are flown from Guatemala to New Orleans in 5 hours.

a million pounds, with a total value of \$2,500,000. For 1947 air-freight shipments into Guatemala rose to 1,600,000 pounds, with a declared value of \$4,423,207. Shipments for 1948 promise to set a new record. One airline alone reports the delivery of 536 head of live-stock into the Caribbean area from January 1 to October 30. These shipments originated in Kansas, Louisiana, Missouri, New Hampshire, Oklahoma, Texas, and Wisconsin.

Finding return cargoes continues to be a problem for air-freight lines and grows as south-bound cargoes increase. During 1945 north- and south-bound loads were nicely balanced. During 1946 north-bound shipments were 60 percent of those going south, and during 1947 this proportion fell to less than half. A similar and possibly more serious situation continues throughout 1948. The problem springs in part from the fact that south-bound shipments consist principally of high-priced items for which high freight charges are of relatively small importance.

On the other hand, Central America has available for shipment principally items of low value per unit of weight. An answer may be found in the production and sale of winter fruits and vegetables, particu-

larly luxury items not yet available in the great markets of the industrial sections in the United States. These might include such products as mangos, three-pound avocados, cherimoyas, zapotes, and the delicious mangosteen. But it takes time to bring these crops into production on a large scale. In the meantime, quicker-growing crops like winter tomatoes, pineapples, and papayas may fill the gap. Farmers of this region had not realized that they would so soon be provided with rapid and efficient air-freight service linking their tropical year-round farms to winter-bound markets of the north. But the magnitude of the new marketing possibilities that have been opened up by air-freight services are now apparent, and some local farmers are hastening to take advantage of the opportunity. When their efforts are realized, a steady two-way flow of air freight between Central America and its northern neighbors will become commonplace.



National Progress in Food and Agriculture Programs, 1948, a publication of the Food and Agriculture Organization of the United Nations, 147 pp., illus., Washington, D. C., September 1948. An analysis of the 1948 Progress and Program Reports that were submitted to FAO by the member governments. Chapter I comprises conclusions and generalizations drawn from analyzing all Progress and Program Reports sent in. "One of the aims is to identify and appraise the broad aspects of food and agriculture progress; and, if possible, to ascertain what common forces appear to be operating in particular groups of countries, or in the world as a whole, that may have an important bearing upon the direction and speed of future progress." Chapters II to VI consider the measures taken in the reporting countries to improve their food and agricultural position and to promote FAO objectives.

Foreign Market Notes—Fish and Fish Products, Foreign Agriculture Circular FFP-1-48, 4 pp. Issued by the Office of Foreign Agricultural Relations, Washington, D. C., October 25, 1948. This is a preliminary summary of Arthur M. Sandberg's observations of market outlets for and competition with U. S. fish and fish products in France, the United Kingdom, and Ireland. Mr. Sandberg, Marketing Specialist from the Fish and Wildlife Service, made this study under the provisions of the Research and Marketing Act.

World Grain Trade— Bilateral Developments



by R. L. GASTINEAU

An aspect of the 1947-48 world grain trade of particular significance to the United States was the continued development of bilateral state trading.

It is estimated that about 930 million bushels of wheat, including wheat flour, were exported from all sources during the July 1947-June 1948 marketing year. Of this amount, approximately 480 million bushels were supplied by the United States. Almost all the remainder—450 million bushels—moved under state trading arrangements of one kind or another. Approximately 350 million bushels, or 78 percent, of this amount were committed through long-term agreements and bulk-purchase contracts. While various arrangements were in effect, all were characterized by their bilateral government-to-government nature. For the most part, they were also characterized by fixed prices. The more important commitments of this type are summarized below by countries.

Canada

The largest amount of wheat now covered by a long-term agreement is included in the contract entered into by Canada and the United Kingdom in July 1946. Under that agreement, Canada contracted to supply the United Kingdom with a total of 600 million bushels of wheat over the 4-year period ending July 31, 1950. For its part, the United Kingdom agreed to purchase a minimum of 160 million bushels of wheat in each of the first 2 years and 140 million bushels for each of the last 2 years of the period. The price for the first 2 years of the agreement was fixed at \$1.55 per bushel for No. 1 Manitoba Northern in store Fort William/Port Arthur. For the remaining 2 years, a minimum price was set at \$1.25 and \$1.00 per bushel, respectively, with the actual price to be negotiated before the beginning of the marketing season. The price for the 1948-49 year was fixed at \$2.00. In addition to the 140 million bushels of wheat earmarked for the United Kingdom during the 1948-

49 year, the Canadian Wheat Board has thus far announced sales of 11 million bushels to India, 7 million bushels to the Union of South Africa, and smaller amounts to Egypt for delivery from the 1948 crop.

Australia

With the exception of her long-term agreement with New Zealand involving an annual amount of between 4 and 5 million bushels, Australia does not at present have any long-term agreements involving wheat. Government-sponsored bulk sales from the harvest that began in December 1947, however, accounted for practically all the exportable surplus from that crop. Among the important allocations announced by the Australian Wheat Board (all of which were at fixed prices ranging from \$2.75 to \$3.00 per bushel) were the following:

Country	Million bushels
United Kingdom and Dependencies.....	80.0
India.....	25.0
New Zealand.....	7.5
France.....	7.0
Ireland.....	4.0
Union of South Africa.....	1.5

Smaller sales of 1 million bushels or less also were arranged on a contract basis with various other countries, mainly in western Europe and the Middle East.

Argentina

Of the various types of agreements now in effect, those negotiated by the Argentine Grain Monopoly (IAPI) with various countries are the most flexible

TABLE 1.—*Argentine trade agreements covering bread grains*
[Annual, quantities in 1,000 metric tons (1.12 short tons)]

Country	Period covered	Wheat	Rye	Total
Italy.....	1947-51	400	70	470
Netherlands.....	1948-52	125	25	150
Switzerland.....	1947-51	125	20	145
Czechoslovakia.....	1947-51	30	—	30
Spain.....	1947-51	300	—	300
Brazil.....	1947-51	2 1,200	—	1,200
Peru.....	1947-51	100	—	100
Bolivia.....	1949-51	65	—	65
Total.....		2,345	115	2,460

¹ Agreement provides for flexible quantity, ranging from 100,000 tons to 250,000 tons annually.

² Provided exportable surplus of wheat exceeds 2.6 million metric tons. If Argentina's surplus falls below that amount in any one year, Brazil will take 45 percent of the surplus in that year.

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TABLE 2.—*Argentine trade agreements covering coarse grains*

[Annual, quantities in 1,000 metric tons (1.12 short tons)]

Country	Period covered	Corn	Barley	Total
United Kingdom and Eire.....	1948	1,272	(1)	1,272
Netherlands.....	1948-52	210	55	265
France.....	1947-51	60	30	90
Switzerland.....	1948-51	109	80	189
Italy.....	1948-51	75	150	225
Spain.....	1947-51	100	—	100
Czechoslovakia.....	1948-51	15	—	15
Total.....		1,832	315	2,147

¹ Under the so-called "Andes" agreement, signed on February 12, 1948, the United Kingdom has the option of receiving 300,000 tons of barley in lieu of an equal quantity of corn.

because of their price provision. In other words, most of the Argentine agreements involving grain are subject to periodic price negotiation, with importers being free to buy elsewhere under more favorable terms after the Argentine Government has had the opportunity of meeting those terms. Therefore, the tables given here, showing long-term agreements, are not necessarily indicative of the amounts of grain actually taken during the year by the countries concerned.

The foregoing agreements for the most part involve an exchange of goods between the importing country and Argentina. In some instances, credit arrangements have facilitated implementation of the agreement. As previously stated, these agreements are not necessarily indicative of the amount of grain actually exported to the countries involved; nevertheless, subject to price agreement, they represent a substantial part of Argentina's total exportable surplus of cereals.

Soviet Union

Soviet grain commitments during the 1947-48 year totaled nearly 3.5 million metric tons.¹ Against this total, approximately 2.5 million tons were actually exported during the year ended July 1, 1948, with the remainder expected to move in the current season. For the most part, these agreements were in the nature of barter involving the exchange of Russian grain for industrial and other products from western Europe and other areas.

Very few agreements have as yet been announced covering supplies of grain from the 1948 crop. It is now indicated, however, that a wider distribution of grain exports must be achieved during the coming year if the total movement approaches that of the past year. More than half of the Soviet grain exports in 1947-48 went to satellite countries in eastern Europe. Because of the improved 1948 harvests in

¹ A metric ton equals 2,204.6 pounds.

those areas, however, their supply position is expected to be much better than a year ago. Information now available on 1948 production in the U. S. S. R. also indicates an improved supply position and suggests that quantities of grain available for export could equal or exceed the total actually exported last year. The amount actually shipped, however, will depend largely on political considerations, with grain exports being completely controlled by the state.

Significance to the United States

The bilateral agreements and commitments in existence at the present time are probably not of immediate concern to the United States because of the continuing abnormal postwar demand for cereals. All the contracts now in existence, except perhaps the Canadian-United Kingdom and the Argentine-Brazil agreements, are for marginal amounts, and even in the latter case the agreement has not been fully implemented. In other words, the agreements have not provided for quantities approaching the total cereal requirement of any importer. They do have the effect, of course, of restricting the area of competition within which our grain trade may operate.

The current situation represents a growth of developments that were beginning to be apparent even before World War II. Importing countries have justified the agreements through a need for assuring stable supplies of a basic commodity. Exporting countries, on the other hand, are seeking assured markets for their exportable surpluses. At the same time, both have been motivated by a desire to encourage two-way trade as a means of solving balance of payments and exchange problems. To the extent

TABLE 3.—*Grain export commitments of the Soviet Union, 1947-48*

Country of destination	Bread grain ¹	Coarse grain ²	Total
	1,000 metric tons	1,000 metric tons	1,000 metric tons
Belgium.....	315	85	400
Bulgaria.....	80	20	100
Czechoslovakia.....	400	200	600
Denmark.....	55	40	95
Egypt.....	216	19	235
Finland.....	170	85	255
India.....	50	—	50
Norway.....	170	20	190
Poland.....	260	40	300
Rumania.....	90	20	110
Sweden.....	65	—	65
Switzerland.....	110	50	160
United Kingdom.....	—	750	750
Total.....	1,981	1,329	3,310

¹ Wheat and rye.

² Oats, barley, corn.

³ Includes 10,000 metric tons undesignated as to kind of grain.

⁴ Includes 200,000 metric tons undesignated as to kind of grain.

⁵ Includes 240,000 metric tons undesignated as to kind of grain.

that the development continues, however, and in the absence of other means of trade, the United States in the future is likely to find itself in the position of a residual supplier to many of the grain markets of the world.

INTERNATIONAL *Agricultural News*

Third Annual Field Day in El Salvador

The Centro Nacional de Agronomía held its third annual Field Day on October 12 at San Andres in El Salvador. This station is operated by the Ministry of Agriculture of El Salvador in cooperation with the United States Department of Agriculture's Office of Foreign Agricultural Relations. Through a Memorandum of Understanding signed October 21, 1942, the two countries have introduced to the people of El Salvador the benefits of systematic agricultural research and extension. As part of the program of cooperation with the American Republics, the station has gained the approval of the people of El Salvador. Dr. James M. Watkins, Director of the station, his staff of American technicians, and the Salvadoran technicians invited the public to visit the station on Field Day to observe progress that has been made. This year, the President of the Republic, Salvador Castañeda Castro, members of the Diplomatic Corps, the Minister of Agriculture, Francisco Orellana Valdés, and several other Cabinet members, government officials, and leading farmers observed in detail the experimental plots. Perhaps the greatest success of the Field Day was the large number of farmers who attended.

Enthusiasm for the Field Day exercises has grown each year. The small farmer and the large landholder listened with great interest to the explanations of the technicians who guided the various groups through the several experimental plots, showing rotation of crops, varieties of corn, rice, and legumes, variations in the spacing of corn, improved varieties of manioc and sweetpotatoes, bamboo varieties, garden vegetables, and fiber crops. From the fields the people were invited to see DDT demonstrations, farmstead structures, and models designed to demonstrate the

effect of soil erosion on land of varying degrees of slope.

International Farm Youth Exchange Project

Seventeen young men and women of the United States farm-youth delegation who participated in the International Farm Youth Exchange Project landed in New York on October 3 after spending the summer working and living on western European farms. Accompanying the United States group were two French youths who are the first Europeans to arrive in the United States as provided for in this program.

In addition to the 2 French youths, Denmark is sending over 3 members, the United Kingdom, 12, and the Netherlands, 3. It is expected that the other host countries will participate if arrangements can be made for their transportation to the United States.

These young folks do not claim to have the answers for solving the problems of Europe, but they do feel they have a better understanding, and they are looking forward to the opportunity to extend hospitality to young farmers from Europe so that they will also understand this country.

Members of the United States delegation expressed admiration for the farmers they had met. They noticed that in Europe emphasis was placed on yield per acre rather than on yield per man as in the United States. In some countries the young people they met expressed little hope for the future of farming.

Many groups, agencies, and individuals within this country and abroad cooperated in making the program a success. The Federal and State Extension Services were in direct charge of the project. They selected the participants to go to Europe and obtained the necessary funds from private sources to carry out the project. The Technical Collaboration Branch of OFAR assisted by making the necessary contacts through the agricultural attachés located at the American Embassies in Britain, Denmark, the Netherlands, France, Norway, Italy, and Sweden. The attachés in many cases worked closely with the farm organizations in the respective countries in selecting farms on which our young people would live and work.

All the group expressed the hope that the Exchange could be expanded in the future. The members are attempting to meet the many requests for talks on their experiences. This indicates that many of our rural people will have an opportunity to hear these young folk tell of farming conditions in Europe.

Dr. Richter Returns From ECA-Paris Assignment

J. H. Richter, Head of OFAR's European Division, returned from Paris in mid-October after a 2½-month assignment to Ambassador Harriman's office (called ECA-Paris). As United States observer to the Food and Agriculture Committee of the Organization of European Economic Cooperation, Dr. Richter attended the conferences of the Committee and the sessions of its Working Party on the 1948-49 recovery program.

The Organization of European Economic Cooperation has worked out the 1948-49 plans with the participating countries by way of gradual approximation. First, the countries prepared a "requirements program" of imports they would want in 1948-49 if they had no actual shortages in commodities or money and a "budget program" of import plans, which were within the limits of the dollar funds given as "illustrative" estimates for each country in the so-called brown books issued in March 1948 by the United States Government. Second, the OEEC suggested a revised division of ECA funds among the countries, tentatively accepted by ECA, and on this basis the countries came up with revised import programs. These programs were debated by the committees of OEEC at the end of September and combined into a program for the whole ERP area.

These voluminous blueprints were transmitted to the office of Mr. Harriman, the United States Special Representative in Europe, where a preliminary review and scrutiny were made by his staff. ECA authorities in Washington now have the plan and will make a final appraisal, decide upon modifications, if necessary, and prepare detailed justifications of the final program, as required under the European Recovery Act.

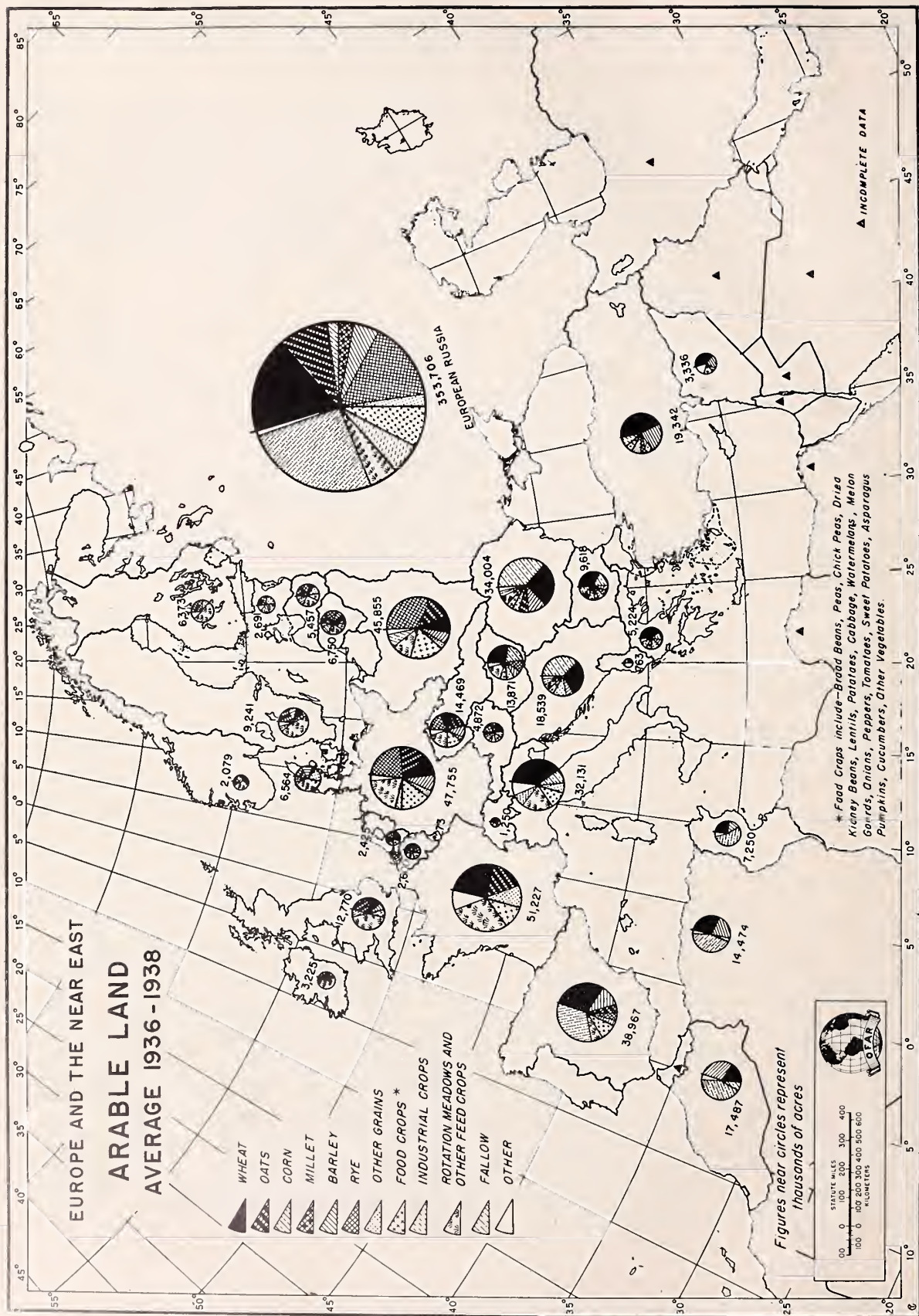
The preliminary review and scrutiny of the agricultural items in the 1948-49 blueprint were made in ECA-Paris' Food and Agriculture Branch under the direction of Ben H. Thibodeaux, Chief of the Branch. A. W. Palmer and Horace Porter specialized on the program sections on fibers; William G. Finn, on fertilizers and other chemicals used in agriculture; Montell Ogden, on agricultural machinery; and C. B. Cheatham, on tobacco. Dr. Richter reviewed the program for foodstuffs and feedstuffs. William E. Morgan, Deputy to Dr. Thibodeaux, acted as coordinator for the whole report. These specialists, as well as Robert L. Oshins of Dr. Thibodeaux's staff,

also served as observers at the meetings of the respective committees of OEEC.

International Conferences

Following are some of the international conferences, which are of agricultural significance, that are scheduled for 1949 and 1950. FOREIGN AGRICULTURE readers may be interested in some of them. In all cases, definite information regarding the place of meeting and the date is not available now, but revisions will be published from time to time as plans for the conferences are completed.

1949		
Organization	Place	Date
Agricultural Economists, International Conference of.	Summer.
Chemistry, International Union of.	Amsterdam or U. S.	1949 or 1951.
Conservation and Utilization of Natural Resources, UN International Scientific Conference of.	May 16.
Cotton Advisory Committee, International, (8th).	Belgium.	April.
Dairy Congress, World.....	Stockholm, Sweden.	Aug. 15-19.
Economic Cooperation, Inter-American.	Buenos Aires, Argentina.	Mar. 28.
Fisheries Conference, International Northwest Atlantic.	Washington, D. C.	Jan. 26.
Forestry and Timber Utilization Conference, Far East, FAO.	Early in 1949.
Forestry Conference, World, FAO (3d).	Helsinki, Finland.	
Geographical Union, International, General Assembly.	Lisbon.	
Geography, First Pan American Consultation on.	Brazil.	Possibly February.
Grassland Congress, International (5th).	Netherlands.	June 22-26.
Inter-American Conference on Agriculture (4th).	Montevideo, Uruguay.	Fall.
Livestock Production Conference, International.	Paris.	
Ornithological Congress, International (10th).	U. S.	1949 or 1950.
Rubber Study Group, Sixth Session.	Malaya.	February or March.
Sugar Beet Research, International Institute of.	Brussels, Belgium.	Early in February.
Universal Cotton Standards Conference, International.	Spring.
1950		
Botanical Congress, International (7th).	Stockholm.	July.
Cotton Advisory Committee, International (9th).	Washington, D. C.	Late in Spring or early in Summer.
Seed Testing Association, International Congress of (9th).	U. S.	May.
Sericulture, International Conference of.	Possibly New York.	
Soil Science, International Congress of.	Amsterdam.	



Nearly 44 percent of the total arable land is in European Russia and less than 0.5 percent in Norway. Cereals are grown on more than 40 percent of the total, and wheat is the most widely grown crop. Wheat, however, is surpassed by oats in some northwestern countries, by rye in Poland, Germany, and the Baltic states where it is grown in the poorer soil areas, and by barley in Morocco, North Africa.

